SCOPE OF WORK
UST CLOSURE
and
SITE INVESTIGATION/REMOVAL ACTION
at the
UNITED STATES COAST GUARD
FORMER LORAN STATION, ILIO POINT,
MOLOKAI, HAWAII
25 AUGUST 1995

1.0 SITE DESCRIPTION, PROJECT OVERVIEW AND OBJECTIVES.

1.1 Site Description.

1.1.1 Site History. The project site is a former United States Coast Guard (USCG) Loran Station located at Ilio Point on the northwest corner of the island of Molokai, Hawaii. The site was turned over to the State of Hawaii Department of Land and Natural Resources (DLNR) on December 6, 1968, at which time all utilities were severed. Prior to construction of the USCG Loran Station, the site served as a Department of Defense (DoD) aerial bombing, strafing, and practice target range from approximately November, 1940, when the Navy acquired the land from a private owner, until December, 1949 when the Navy transferred the land to the USCG. The Ilio Point Loran Station occupied only a few acres of the total 261 acres originally acquired and disposed of by DoD. According to State of Hawaii records, when the USCG station was established, the Ilio Point area was "superficially" decontaminated and only in the immediate area of the USCG buildings was a thorough decontamination completed. The project site is about 18 miles from Kaunakakai, and crosses approximately 10 miles of 4 x 4 vehicle dirt roads across Molokai Ranch lands. A map of the island of Molokai with the project location circled is shown in Figure 1.

1.1.2 Geology. Soils at the site are primarily dune sand and lithified dune sand of calcareous origin. Physiographically, Ilio Point comprises a unique example of a Clifted Sedimentary Headland based on the lithified dune sand structure.

1.1.3 Hydrology. The site is not in a flood hazard area and there are no streams, springs, or groundwater sources located on the site.

1.1.4 Previous Studies. Transformer Oil Testing Results, Ilio Point, Molokai.

1.1.5 Authority. The work detailed in this Scope of Work (SOW) is authorized by the United States Coast Guard.

1.2 Project Overview and Objectives.

The Contractor shall prepare a Work Plan, Site Safety and Health Plan (SSHP), Sampling and Analysis Plan (SAP), perform UST closure activities and prepare a UST Closure Report (CR).

ENCLOSURE(1)

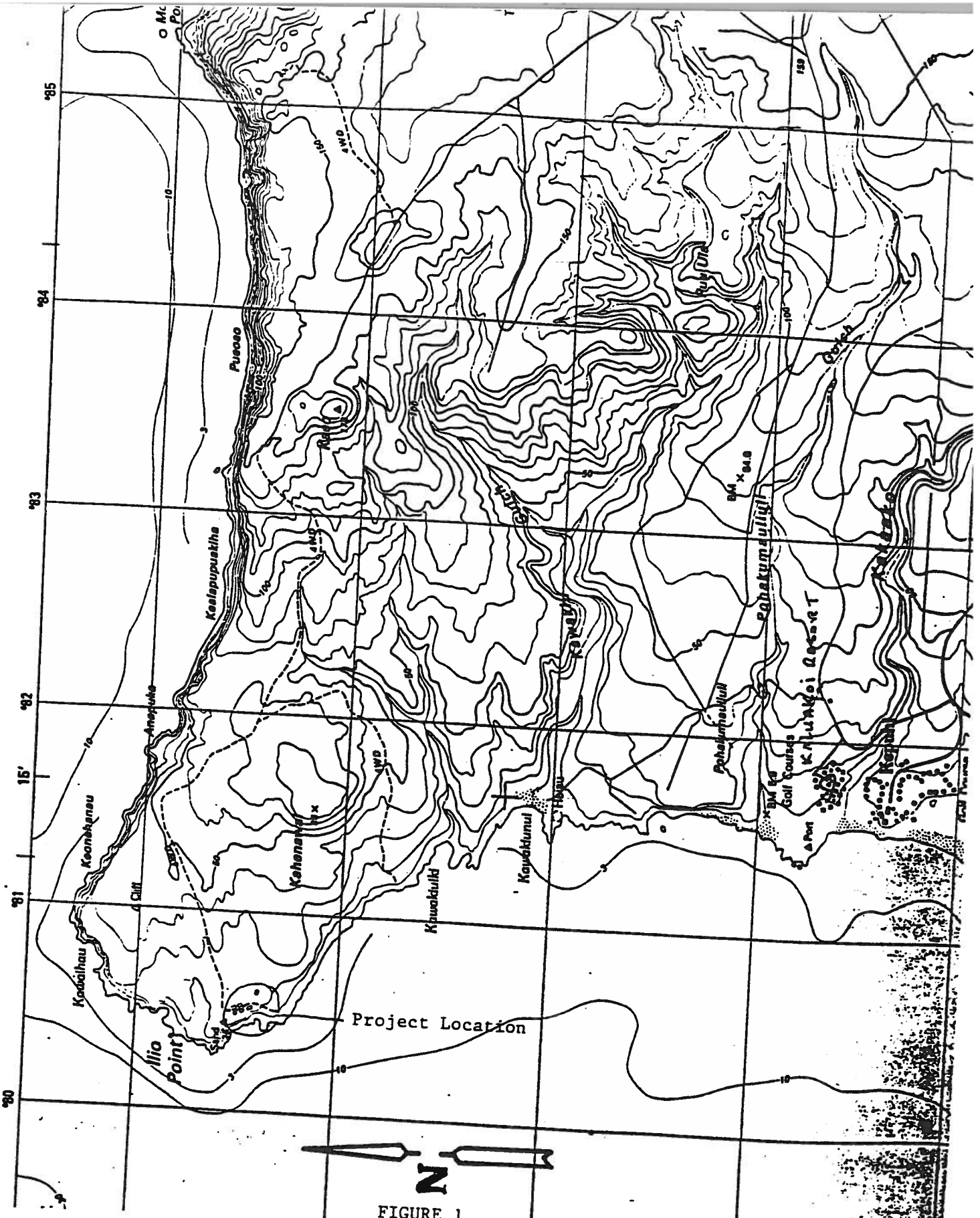

FIGURE 1
MAP OF PROJECT AREA
Approximate Scale: 1 Centimeter = 250 Meters, Contours 20 Meters
Bathymetry in Fathoms
USGS 1:25,000 Metric Scale, Molokai West, Hawaii

Additional tasks to perform further site characterization, removal, and disposal activities, and prepare a Site Investigation and Removal Action Report (SI/RA) are included in this SOW as options. All removal, remediation, and disposal work tasks shall be conducted in an environmentally acceptable manner conforming to existing Federal, State, and local regulations. In addition, the Contractor and Subcontractors shall comply with all aspects of the Coast Guard/DLNR Right-of-Entry Agreement. A draft version of the agreement is provided in Appendix E. After completion of the work, the site shall be restored to a condition acceptable to the State of Hawaii DLNR.

1.2.1 Underground Storage Tanks. The removal and off-site disposal of one (1) 500 gallon gasoline underground storage tank (UST) and three (3) 2500 gallon diesel USTs. In the event that closure samples indicate that a release has occurred, an option to perform limited release response activities may be exercised (OPTION 1). Release response activities include overexcavation of the UST pits by five feet in all directions and on-site soil remediation.

1.2.2 Day Tanks (Aboveground Storage Tanks). The removal and off-site disposal of two (2) 300 - 400 gallon diesel day tanks (OPTION 2).

1.2.3 Dry Wells. The excavation of two dry wells and collection of samples from the bottom of the dry wells to determine if contamination exists in the wells (OPTION 3).

1.2.4 Transformers. The removal and off-site disposal of three (3) 25 - 50 gallon non-PCB containing transformers (OPTION 4).

1.3 **Major Work Tasks.**

1.3.1 Task 1 - Project Management and Plans Preparation.
1.3.2 Task 2 - Work Plan (WP), Site Safety and Health Plan (SSHP), Sampling and Analysis Plan (SAP).
1.3.3 Task 3 - Closure of Four (4) USTs.
1.3.4 Task 4 - Over excavation and Remediation (OPTION 1).
1.3.5 Task 5 - UST Closure Report (CR).
1.3.6 Task 6 - Removal and Disposal of Two (2) Day Tanks (OPTION 2).
1.3.7 Task 7 - Excavation of Dry Well and Analytical Testing (OPTION 3).
1.3.8 Task 8 - Removal and Disposal of Three (3) Transformers (OPTION 4).
1.3.9 Task 9 - Site Restoration.
1.3.10 Task 10 - Site Investigation/Removal Activities Report (SI/RA) (OPTION 5).

2.0 DETAILED WORK TASKS.

2.1 Task 1 - Project Management and Plans Preparation.

2.1.1 Administration and Coordination of Contract.
The Contractor shall appoint a Project Manager (PM) as a single point of contact for this delivery order. The PM shall be responsible for coordination with the Government regarding

deliverables, schedules, meetings, and permits to satisfy the requirements of this Scope of Work (SOW). All coordination shall be made with the Government appointed United States Army Corps of Engineers (USACE) Technical Manager (TM), who will oversee all technical and contractual activities.

2.1.2 Personnel. The Contractor shall provide information specifying the qualifications of the principal investigator, project manager, geologist or soil scientist, ordnance and explosive waste (OEW) specialist, certified industrial hygienist (CIH) and the site safety officer in the Work Plan. Brief information presented shall indicate the individuals' work history and indicate successful completion of all necessary training required to perform the tasks in a professional manner.

2.1.3 Review and Evaluation of Prior Studies.
The Contractor shall review and evaluate existing prior studies, and data as provided by the Contracting Officer (CO), his representative (COR), or the TM, and obtained from persons contacted in connection with this project.

2.1.4 Right of Entry. The Contractor and Subcontractors shall comply with all aspects of the Coast Guard/DLNR Right-of-Entry Agreement. A draft version of the agreement is provided in Appendix E.

2.1.5 Walk-over Site Inspection.
The Contractor shall conduct a walkover visual inspection of the project site, accompanied by the CIH, to gather information for preparing the Work Plan (WP), the Site Safety and Health Plan (SSHP), the Sampling and Analysis Plan (SAP) the UST Closure Report (CR), and the Site Investigation/Removal Activities Report (SI/RA).

2.1.6 Notifications and Coordination Meetings.

2.1.6.1 *Notification of DOH.* The Contractor shall notify the DOH, in writing, of the intent to close the USTs at least 30 days prior to commencing closure activities.

2.1.6.2 *Notification of Molokai Fire Department.* The Contractor shall notify the Molokai Fire Department of the intent to close the USTs at least 30 days prior to commencing closure activities.

2.1.6.3 *Notification of USACE.* The Contractor shall notify the USACE, 10 days in advance, of the dates of UST removal activities to assure USACE attendance during UST removal.

2.1.6.4 *Project Briefing.* The Contractor shall be prepared to provide one briefing during the project duration, at a location specified by the COR.

2.2 Task 2 - Work Plan (WP), Site Safety and Health Plan (SSHP), Sampling and Analysis Plan (SAP).

The WP, SSHP, and SAP shall be accepted by the COR prior to commencing field work. In the event corrections or comments are made by the COR on the draft plans, changes shall be incorporated by the Contractor before final acceptance by the COR. The plans may be changed during the course of field work with the concurrence of the COR. The plans shall address all optional project tasks.

2.2.1 Work Plan (WP).

2.2.1.1 The Contractor shall prepare a Work Plan detailing the manner in which the SOW shall be executed. The Work Plan shall include information on the project background, management, and quality control.

2.2.1.2 The Work Plan shall include a schedule of projected activities and time frame.

2.2.2 Site Safety and Health Plan (SSHP).

2.2.2.1 The Contractor shall utilize the services of a Certified Industrial Hygienist (CIH) experienced in hazardous waste site operations and an OEW Specialist to oversee the development and implementation of the required health and safety documents.

2.2.2.2 The SSHP shall specify the proper safety procedures to be followed in the event that unexploded ordnance (UXO) is discovered during work operations. If explosive contamination or unexploded ordnance is discovered at any time during work operations at the site, the Contractor shall mark the location, immediately stop operations in the affected area, and notify the CO.

2.2.2.3 The Contractor shall be responsible for reviewing all information provided and preparing the necessary documents which contain the health and safety criteria, procedures, and practices for the project site sufficient to comply with the pertinent regulations to protect the on-site personnel and the environment. The document shall insure that the potential off-site receptors of the chemical, physical, and/or biological hazards specific to these sites will not be adversely impacted. Detailed requirements for the SSHP are defined in Appendix A of this SOW.

2.2.3 Sampling and Analysis Plan (SAP).

2.2.3.1 The Contractor shall prepare a site specific SAP for all field activities, laboratory activities, and contract deliverables related to the acquisition and reporting of chemical data. The Contractor shall select the locations and prepare the investigative plan in accordance with the requirements specified in EM 200-1-3 and in Appendix B of this Scope of Work.

2.2.3.2 The SAP shall include provisions for the collection, packaging, and shipping of ten percent quality assurance samples by the Contractor. The Government will designate a USACE

division laboratory for QA sample analyses and provide a Laboratory Information Management System (LIMS) number for project identification.

2.2.3.3 A geologist or soil scientist shall be present during all excavation and sampling work to record information concerning the type of material encountered during excavation and sampling, its porosity, and any anomalies that may affect the subsurface characteristics and distribution of contaminants.

2.3 **Task 3 - Closure of Four (4) Underground Storage Tanks.**

Three (3) 2500 gallon diesel USTs and one (1) 500 gallon gasoline UST shall be removed and disposed of off-site. The USTs shall be removed in accordance with the governing regulations in 40 CFR Part 280, Subpart F as enforced by the U.S. Environmental Protection Agency (EPA) and the State of Hawaii Department of Health (DOH) "Technical Guidance Manual for Underground Storage Tank Closure and Release Response". The Contractor shall also adhere to technical guidelines found in USACE "Removal of Underground Storage Tanks", EM 1110-3-178.

2.3.1 Photographic Record. A captioned photographic record of each UST removal shall be maintained and become a part of the UST Closure Report. The captioned photographic record shall include at least one (1) before photograph showing the UST site in relationship to the existing facilities, one (1) photograph showing UST removal, one (1) photograph documenting condition of the UST and one (1) photograph showing all excavations backfilled to grade. In addition, any evidence of corrosion damage or lack of structural integrity shall be photographed. Several photographs may be required to show the extent of the damage including a general photograph taken as a reference for subsequent close ups.

2.3.2 Empty Contents of UST. Fuel shall be pumped from the UST before any excavation or demolition begins. A hand pump may be required to remove the bottom few inches of product from the UST. It is the responsibility of the Contractor to recycle or dispose of the fuel in accordance with State and Federal regulations. Copies of all certifications of final disposal, signed by the responsible treatment/disposal facility officials, shall be included in the UST Closure Report.

2.3.3 OEW. The OEW Specialist shall be present during all excavation work. If explosive contamination or unexploded ordnance is discovered at any time during excavation or tank removal operations, the Contractor shall mark the location, immediately stop operations in the affected area, and notify the CO.

2.3.4 Excavation. Excavated fill material that is not placed in containers shall be placed on polyethylene sheeting to prevent possible contamination of the ground surface. If contamination is detected based on visual or olfactory observations, or PID readings exceeding 50 ppm (diesel tank excavation) or 500 ppm (gas tank excavation), the soil is designated as contaminated and shall be staged in an area separate from the non-contaminated soil.

2.3.5 UST Removal. The UST shall be lifted out of the excavation using equipment with sufficient capacity to handle the weight of the tank. Slings and/or lifting chains shall be used. The tank shall not be dragged out of the excavation.

2.3.6 Pipelines. Associated piping shall be excavated and removed up to the adjoining structure or property limits and capped at that point. If an additional source of fuel beyond the projects limits is connected to the tank, the connecting pipe shall be removed and capped at the project limits or at the limits of Governments property as approved by the COR. The stub of the additional fuel source shall be capped in such a manner as to prevent future leaking.

2.3.7 Sampling. After UST removal, the Contractor shall collect soil samples for laboratory analysis as directed in the "Technical Guidance Manual for Underground Storage Tank Closure and Release Response", State of Hawaii, Department of Health". If the laboratory results indicate that a release has occurred, additional excavation, remediation, and sampling and analysis may be performed if Option 1 has been exercised by the Government.

2.3.8 Barricades. Any open excavation shall be marked and barricaded.

2.3.9 UST Cleaning. The Contractor shall clean the tank on site. During cleaning of the UST, the Contractor shall ensure that no deleterious material shall leach, run off, percolate into, or harm the environment in any way. Residual sludge, if any, and solvent rinsate that cannot be recycled shall be contained in Department of Transportation (DOT) specified drums, tested, and disposed of as hazardous waste in accordance with applicable Federal, State, and local regulations. Copies of all certifications of final disposal shall be included in the UST Closure Report.

2.3.10 UST Disposition. Once cleaned, the UST shall be cut up or crushed. Any tank identification plates shall be removed and returned to the Government with the UST Closure Report. The processing facility shall provide a written certificate of tank disposition. As a minimum, the certificate shall state the tank capacity, construction, manufacturer (if determinable), method of disposition, and the date of disposition. The certificate of tank disposition shall be included in the UST Closure Report.

2.3.11 Backfilling of Excavation. In the event that the excavation is not contaminated or if contaminated, that the option to overexcavate and remediate is not exercised, the excavations shall be backfilled. The backfill shall be placed in six inch lifts and compacted. Density of compaction shall be such that it matches surrounding soil conditions.

2.3.11.1 *Backfilling of a Non-Contaminated Site.* If the laboratory reports for the UST closure samples indicate that the soil remaining in place is not contaminated, the excavation shall be backfilled to grade with clean material. The backfill can be either clean excavation spoils or clean fill material, free of excessive organic or other deleterious matter, provided by the contractor.

2.3.11.2 *Backfilling of a Contaminated Site.* If the site is determined by laboratory testing to be contaminated beyond the limits of excavation and the option to overexcavate and remediate the contaminated soil is not exercised, special precautions shall be taken to contain the possible migration of the contaminants.

Prior to backfilling, a double layer of 10 mil thick polyethylene sheeting shall be placed in the excavation with a minimum of one (1) foot overlaps at all joints. All joints shall be double taped and the liner shall be inserted intact without any rips or penetrations. The excavation shall be backfilled to grade with the contaminated soil and additional clean fill material as required. The contaminated backfill shall be capped with a double layer of 10 mil polyethylene sheeting extending four feet beyond the sides of the excavation. The cap sheet shall be anchored. The UST location shall be marked by installing a concrete survey monument over the center of the UST location. The location of the survey monument shall be determined using either Global Positioning Satellites (GPS) or by surveying. The survey information shall be submitted along with a site map showing the monument location, survey reference points, and other structures on the site. The map and survey data shall be included in the UST Closure Report.

2.4 Task 4 - Overexcavation (GOVERNMENT OPTION 1).

This task is specified as Government Option 1 and may be exercised in the event that closure samples indicate that the UST sites have been impacted by a release of product. The option is a limited release response and includes overexcavation of the UST pits to five feet in all directions and on site soil remediation. This option may be exercised for one or more USTs.

2.4.1 OEW. The OEW Specialist shall be present during all excavation work. If explosive contamination or unexploded ordnance is discovered at any time during excavation operations, the Contractor shall mark the location, immediately stop operations in the affected area, and notify the CO.

2.4.2 Overexcavation. If laboratory analyses indicate that a UST site has been impacted by a release of product, the UST pit will be overexcavated by five feet in all directions, or less, if the structural integrity of the adjoining buildings will be affected. If contamination is detected based on visual or olfactory observations, or PID readings exceeding 50 ppm (diesel tank excavation) or 500 ppm (gas tank excavation), the soil is designated as contaminated and shall be staged in an area separate from the non-contaminated soil.

2.4.3 Overexcavation Clean-Up Verification Sampling. After completion of the overexcavation, soil samples shall be collected from the excavation pit and analyzed as specified in the DOH "Technical Guidance Manual for Underground Storage Tank Closure and Release Response". Analytical methods, practical quantitation limits, and the DOH Interim Recommended Cleanup Criteria (DOH IRCC) are shown below in Table 1.

2.4.3.1 *Clean Overexcavation Pit.* If the laboratory results indicate that the soil remaining in place is not contaminated, then the excavated, contaminated soil shall be bioremediated as detailed in 2.4.4.

2.4.3.2 *Contaminated Overexcavation Pit.* If the laboratory results indicate that the soil remaining in place is contaminated, then the excavation shall be backfilled as detailed in 2.4.7.2 and a follow-up project will be necessary to determine the extent of contamination and remediation of the release. The follow-up work is not addressed under this SOW.

Table 1

Analyte	Analytical Method	Reporting Limit	DOH IRCC Soil below UIC Line
		mg/kg*	mg/kg
TPH as Gasoline	5030/8015 or LUFT	5	No Standard
TPH as Diesel	3550/8015 or LUFT	10	No Standard
Benzene	5030/8015 or 5030/8020	0.002	1.7 ppm
Toluene	5030/8015 or 5030/8020	0.002	21 ppm
Ethyl benzene	5030/8015 or 5030/8020	0.002	1.4 ppm
Acenaphthene	3540/8310 or 3550/8310	1.0	100 ppm
Naphthalene	3540/8310 or 3550/8310	1.0	100 ppm
Fluoranthene	3540/8310 or 3550/8310	1.0	500 ppm
Benzo(a)pyrene	3540/8310 or 3550/8310	0.1	1.0 ppm
Lead	7000/6010	1.0	400 ppm

* Dry weight basis.

References:

4 digit methods - "Test Methods for Evaluating Solid Wastes", EPA SW-846, 3rd ed. LUFT Methods - "Leaking Underground Fuel Tank Field Manual", California State Water Resources Control Board, May 1989.

2.4.4 Soil Treatment. The contaminated soil shall be placed in a bermed, soil management unit (SMU). As the site is isolated and in a windy location, the SMU shall be constructed of materials that will ensure that the soil will be contained in adverse conditions. The soil shall be bioremediated on-site in the manner determined by the Contractor to be most appropriate for the site. The Contractor shall submit for approval the SMU design and bioremediation technique in the Work Plan.

2.4.5 SMU Clean-Up Verification Sampling. Clean-up of the soil shall be verified by laboratory analysis as specified in the DOH "Guidance Manual for UST Closure and Release Response". The soil staged in the SMU shall be sampled using a statistical approach as outline in EPA SW-846(1986) and OSWER Directive 9360.4-10 (1991). Analytical methods, practical quantitation limits, and the DOH Interim Recommended Cleanup Criteria (DOH IRCC) are shown above in Table 1.

2.4.6 SMU Dismantlement. After verification of successful remediation of the soil staged in the SMU, the SMU shall be dismantled. The soil shall be used as backfill in the excavations or spread in the area. All construction material associated with the SMU shall be removed from the site.

2.4.7 Backfilling of Excavations. The overexcavated pits shall be backfilled as detailed below. The backfill shall be placed in six inch lifts and compacted. Density of compaction shall be such that it matches surrounding soil conditions.

2.4.7.1 *Backfilling of a Non-Contaminated Site.* If the laboratory results for the overexcavation clean-up verification samples indicate that the soil remaining in place is not contaminated, the excavation shall be backfilled to grade with clean material. The backfill can be either clean excavation spoils or clean fill material, free of excessive organic or other deleterious matter, provided by the contractor.

2.4.7.2 *Backfilling of a Contaminated Site.* If the site is determined by laboratory testing to be contaminated beyond the limits of the 5 foot overexcavation, special precautions shall be taken to contain the possible migration of the contaminants. Prior to backfilling, a double layer of 10 mil thick polyethylene sheeting shall be placed in the excavation with a minimum of one (1) foot overlaps at all joints. All joints shall be double taped and the liner shall be inserted intact without any rips or penetrations. The excavation shall be backfilled to grade with the contaminated soil, which had been excavated during the UST closure and over excavation, and additional clean fill material as required. The contaminated backfill shall be capped with a double layer of 10 mil polyethylene sheeting extending four feet beyond the sides of the excavation. The cap sheet shall be anchored. The UST location shall be marked by installing a concrete survey monument over the center of the UST location. The location of the survey monument shall be determined using either Global Positioning Satellites (GPS) or by surveying. The survey information shall be submitted along with a site map showing the monument location, survey reference points, and other structures on the site. The map and survey data shall be included in the UST Closure Report.

2.5 Task 5 - UST Closure Report (CR).

The UST Closure Report shall follow the DOH's Technical Guidance Manual, Appendix 3-B Format. In the event corrections or comments are made by the COR on the draft report, changes shall be incorporated by the Contractor before final acceptance by the COR.

2.6 Task 6 - Removal and Disposal of Two (2) Day Tanks (GOVERNMENT OPTION 2).

The two day tanks are located in the Power Building. The day tanks are approximately 5 feet tall, 2 feet in diameter, and have a capacity of 300-400 gallons. The tanks were used for diesel storage. The amount of fuel, if any, contained in the tanks is unknown. Government option 2 includes the removal and disposal of the day tanks and any tank contents.

2.6.1 Photographic Record. A captioned photographic record of the removal of the day tanks shall be included in the SI/RA Report. The photographic record shall include at least one (1) before photograph of the day tanks in relationship to the existing facilities and one (1) after photograph showing the facility after removal of the day tanks.

2.6.2 Empty Contents of Day Tank. Fuel shall be pumped from the day tank before any tank or piping removal work begins. A hand pump my be required to remove the bottom few inches of product from the day tank. It is the responsibility of the Contractor to recycle or dispose of the fuel in accordance with State and Federal regulations. Copies of all certifications of final disposal shall be included in the SI/RA Report.

2.6.3 Day Tank Removal. The day tank shall be removed from the site using equipment with sufficient capacity to handle the weight of the tank. Slings and/or lifting chains shall be used. The tank shall not be dragged.

2.6.4 Pipelines. Pipes associated with the day tanks shall be removed to floor level and capped at that point. If an additional source of fuel beyond the project's limits is connected to the day tank, the connecting pipe shall be removed and capped at the project limit. The stub of the additional fuel source shall be capped in such a manner as to prevent future leaking.

2.6.5 Day Tank Cleaning. The Contractor shall clean the tank on site. During cleaning of the day tank, the Contractor shall ensure that no deleterious material shall leach, run off, percolate into, or harm the environment in any way. Cleaning shall be in accordance with API Publication 2105, "Cleaning Petroleum Storage Tanks" and with NIOSH "Criteria for a Recommended Standard - Working in Confined Spaces." Residual sludge, if any, and solvent rinsate that cannot be recycled shall be contained in Department of Transportation (DOT) specified drums, tested, and disposed of as hazardous waste in accordance with applicable State and Federal regulations. Copies of all certifications of final disposal shall be included in the SI/RA Report.

2.6.6 Day Tank Disposition. Once cleaned, the day tank shall be cut up or crushed. Any tank identification plates shall be removed and returned to the Government with the SI/RA Report. The processing facility shall provide a written certificate of tank disposition. As a minimum, the certificate shall state the tank capacity, construction, manufacturer (if determinable), method of disposition, and the date of disposition. The certificate of tank disposition shall be included in the SI/RA Report.

2.7 Task 7 - Excavation of Two (2) Dry Wells (GOVERNMENT OPTION 3).

During the July, 1995 site visit no evidence of the dry wells was observed. "As built" drawings indicate approximate locations of the wells. One well is located on the ocean side of the Power Building and the other dry well is located on the ocean side of the Garage and Storage Building. The area is covered with weeds and hale koa. The objective of Option 3 is to excavate the dry well, locate the bottom, which would be the area most likely to be contaminated, and collect a sample from the bottom of the dry well. This option may be exercised for one or both dry wells.

2.7.1 Photographic Record. A captioned photographic record of activities and a narrative detailing the dry well activities shall be included in the SI/RA Report. The photographic record shall include at least one (1) before photograph of the dry well in relationship to the existing facilities, one (1) photograph showing the bottom of the dry well, and one (1) photograph showing the excavation backfilled to grade.

2.7.2 OEW. The OEW Specialist shall be present during all grading and excavation work. If explosive contamination or unexploded ordnance is discovered at any time during clearing, grading, or excavation operations, the Contractor shall mark the location, immediately stop operations in the affected area, and notify the CO.

2.7.3 Clearing the Site. The Contractor shall clear the site of vegetation and inspect the area for evidence of the dry well.

2.7.4 Grading of Area. Based on visual evidence and the location indicated on "as built" drawings, the Contractor shall grade, to a depth of two (2) feet, the area where the dry well is suspected to be located. The area shall not exceed 400 square feet. The Contractor shall look for evidence of POL contamination and changes in soil characteristics which would be indicative of the dry well.

2.7.5 Excavation. The dry well shall be excavated to the bottom of the dry well, up to a maximum depth of 10 feet.

2.7.6 Sample Collection. Samples shall be collected to characterize the dry well sites. As a minimum, two samples shall be collected from the dry well, one sample shall be collected from the bottom of the dry well and one from the excavated material. Both samples shall be tested for Method 8260 GC/MS Volatile Organics, Method 8270 GC/MS Semivolatile Organics, and Method 8080 Organochlorine Pesticides and PCBs, Total RCRA Metals, TPH as Gasoline, TPH as Diesel, and Total Recoverable Petroleum Hydrocarbons.

2.7.7 Backfilling of Dry Well. Based on laboratory results the dry well excavations shall be backfilled. If it is not possible to obtain laboratory results during field mobilization, the well shall be backfilled as detailed in 2.7.7.2. The backfill shall be placed in six inch lifts and compacted. Density of compaction shall be such that it matches surrounding soil conditions.

2.7.7.1 *Backfilling of a Non-Contaminated Site.* If the laboratory reports indicate that the excavated material and the soil remaining in place are not contaminated, the excavation shall be backfilled to grade with the clean excavation spoils.

2.7.7.2 *Backfilling of a Contaminated Site.* If the soil remaining in place and/or the excavated material are determined to be contaminated, special precautions shall be taken to contain the possible migration of the contaminants. Prior to backfilling, a double layer of 10 mil thick polyethylene sheeting shall be placed in the excavation with a minimum of one (1) foot overlaps at all joints. All joints shall be double taped and the liner shall be inserted intact without any rips or penetrations. The excavation shall be backfilled to grade with the contaminated soil and additional clean fill material as required. The contaminated backfill shall be capped with a double layer of 10 mil polyethylene sheeting extending four feet beyond the sides of the excavation. The cap sheet shall be anchored. The dry well location shall be marked by installing a concrete survey monument over the center of the dry well location. The location of the survey monument shall be determined using either Global Positioning Satellites (GPS) or by surveying.

The survey information shall be submitted along with a site map showing the monument location, survey reference points, and other structures on the site. The map and survey data shall be included in the SI/RA Report.

2.8 **Task 8 - Removal/ Disposal of Three (3) Transformers (GOVERNMENT OPTION 4).**

Option 4 includes the removal and off-site disposal of three (3) non-PCB transformers. The transformers are located next to the Power Building. Laboratory reports from the USCG sampling of the oil in the transformers are presented in Appendix D. Transformer oil testing showed PCB content to be <2 ppm for each of the transformer oil samples.

2.8.1 Photographic Record. A captioned photographic record of activities and a narrative detailing the transformer removal shall be included in the SI/RA Report. The photographic record shall include at least one (1) photograph showing the transformers in relation to the existing facility and one (1) photograph showing the facility after removal of the transformers.

2.8.2 Draining of Transformer Oil. The Contractor shall drain the transformers on-site and dispose of the oil in accordance with Federal, State, and local regulations. Copies of all certifications of final disposal, signed by the responsible treatment/disposal facility officials, shall be included in the SI/RA Report.

2.8.3 Transformer Removal. The Contractor shall remove the transformers and the associated cables. Cables shall be trimmed to surface grade. Transformers and cables shall be disposed of in accordance with Federal, State, and local regulations.

2.9 **Task 9 - Site Restoration**

2.9.1 Site Condition. The Contractor shall return the site to a condition acceptable to the State of Hawaii Department of Land and Natural Resources. Contact points at the DLNR are Patti Miyashiro, Land Management Division, 587-0427 and Philip Ohta, Maui District Land Office, 243-5352.

2.9.2 Barricades and Signage. At the conclusion of the contract, the Contractor shall remove barricades and signage.

2.10 **Task 10 - Site Investigation/Removal Activities Report (SI/RA) (GOVERNMENT OPTION 5).**

2.10.1 The Contractor shall prepare a report that describes the contamination that is present at the project site based on the investigation performed under this Scope of Work. This report shall detail activities related to the day tanks, dry wells and the transformers, activities related to the UST closures shall only be referenced and not covered in detail in the SI/RA as that information shall be presented in the UST Closure Report. The report shall include copies of all analyses performed for disposal of waste and copies of all certifications of final disposal signed by the responsible disposable facility officials.

2.10.2 As a minimum, the format for the SI/RA Report shall be as follows, addressing each of the major categories listed below:

EXECUTIVE SUMMARY

1.0 INTRODUCTION

1.1 SITE BACKGROUND INFORMATION

1.2 REMOVAL ACTIVITIES

1.3 DESCRIPTION OF SAMPLING AND ANALYTICAL TECHNIQUES

1.4 NATURE AND EXTENT OF CONTAMINATION

1.5 RECOMMENDATIONS

REFERENCES

APPENDICES

3.0 SUBMITTALS AND REVIEWS.

3.1 **Submittal Quality.** Although submittals required by this contract are technically reviewed by the Government, it is emphasized that the work must be performed using proper internal controls and review procedures. The Contractor shall insure that the document has been reviewed for the following: (a) completeness for each discipline commensurate with the level of effort required for that submission, (b) elimination of conflicts, errors and omissions, and (c) the overall professional and technical accuracy of the submission. Documents which are significantly deficient in any of these areas will be returned to the Contractor for correction and/or upgrading prior to the Government completing it's review. Contract submission dates will not be extended if a resubmission of draft material is required for this reason.

3.2 **Plan and Report Format.** Plans and reports shall consist of 8-1/2" by 11" pages with drawings folded, if necessary, to this size. A decimal paragraphing system shall be used. A report title page shall identify the report title, the Contractor, the contract number, and the date. All site drawings shall be of engineering quality with sufficient detail to show interrelations of major features on the site map (i.e., north arrows, keys, scales, etc.). Field notes, laboratory reports, and other selected appendices of the draft and final reports may have printing on both sides of the pages. The report covers shall be durable binders which hold pages firmly while allowing easy removal/addition of pages. The original final report shall not be bound and shall contain original color photographs. All other reports may contain good quality color laser copies of the photographs.

3.3 **Submittal Delivery.** Contract submittals shall be furnished by hand delivery, overnight mail, or express mail (maximum 2 day delivery service) to the Honolulu Engineer District. Following each submission, comments generated as a result of the Government's review shall be incorporated by the Contractor.

Contract submittals shall be furnished to the Honolulu Engineer District as follows:

U.S. Army Engineer District, Honolulu
Corps of Engineers, Bldg. 230
ATTN: CEPOD-ED-EH
Honolulu, HI 96858-5440

The Government will provide a Review Request Transmittal to accompany all plans and reports being sent to the Missouri River Division for review. Contract submittals shall be furnished to the Missouri River Division as follows:

U.S. Army Engineer Division, Missouri River
ATTN: CEMRD-ED-CT (Document Control)
12565 W. Center Rd.
Omaha, NE 68144

The following number of copies of each plan/report shall be submitted:

	Copies of Draft Plan/Report		Copies of Final Plan/Report	
Submittal	HED	MRD	HED	MRD
SSHP/SAP	5	0	5	0
CR	5	2	10	1
SI/RA Report	5	2	10	1

4.0 MEETINGS AND COORDINATION A conference shall be held with representatives of the USCG and the USACE prior to beginning the field work. If necessary, a conference shall be held between the Contractor and the Contracting Officer or his/her representatives to resolve contractual difficulties or to brief the Contracting Officer regarding any environmental problems.

5.0 PROJECT WORK SCHEDULE. The following schedule shall be used to complete this delivery order. Government options are presented in italics.

Activity	Maximum Calendar Days after Award of Delivery Order	% Complete
Submit Draft SSHP, SAP	30	15%
Government Review Comments of SSHP and SAP	60	17%
Submit Final SSHP, SAP	80	19%
Government Acceptance of SSHP and SAP	95	20%
UST Removal/*Remediation/ Site Investigation/Removal Action*	215	70%
Submit Draft CR and *SI/RA*	245	95%
Government Review Comments of Draft CR and *SI/RA*	275	97%
Submit Final CR and *SI/RA*	295	99%
Government Acceptance of CR and *SI/RA*	310	100%

6.0 PUBLIC AFFAIRS. The Contractor or his subcontractors shall not make available to the news media or publicly disclose any data generated or reviewed under this contract. The Contractor shall not release any news articles concerning this project without the consent of the Contracting Officer. When approached by the news media, the Contractor shall refer all questions to the Technical Manager for response.

7.0 RELEASE OF INFORMATION. The information developed, gathered, and assembled in fulfillment of the contract as defined in or related to the Scope of Work shall not be released by the Contractor, his/her consultants, his/her subcontractors or their associates without prior coordination and approval by the Contracting Officer or his/her designee.

8.0 USE OF INFORMATION. The information developed, gathered, and assembled in fulfillment of the contract requirements as defined or related to the Scope of Work will become the complete property of the Government and shall, therefore, not be used by the Contractor for any purpose at any time without the written consent of the Contracting Officer.

9.0 QUALITY CONTROL. The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under this contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and tests to ensure strict compliance with the terms of the contract. The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to

change any term or condition of the specification without the Contracting Officer's written authorization.

10.0 EQUIPMENT. The Contractor shall provide all equipment and supplies, including water and power, required to complete this contract. The Contractor shall provide protective clothing and equipment equal to the maximum level of protection provided for the on-site workers for two Government representatives.

11.0 SPILL RESPONSIBILITY.

11.1. **Cleanup of Spill.** The Contractor is solely responsible for any spills occurring during the performance of the contract and shall clean up such spills in accorandance with all Federal, State, and local regulations, and to the satisfaction of the Contracting Officer. All spilled material and any contaminated materials resulting from the spill shall be disposed of by the Contractor at no expense to the Government.

11.2. **Reporting of Spill.** The Contractor is required to make all spill notifications under Federal, State, and local regulations, including, but not limited to 40 CFR 110, 302, 370, 372, etc., immediately upon discovery, to appropriate regulatory authorities. Within one hour of notification to regulatory authorities, the Contractor shall verbally notify the TM. Within 24 hours the Contractor shall submit a written report to the TM which contains the information required from the Spill Notification Information List and the Spill Notification Checklist shown in Appendix C.

12.0 DISPOSAL OF WASTES. The Contractor shall be responsible for proper labeling and disposal of all wastes generated during the execution of this project. All drums shall be clearly labeled with site location, drum start date, and contents information at the time waste is first placed in the drum. All labeling and disposal shall be done in accordance with applicable Federal, State, and local regulations.

13.0 PAYMENT. The Contractor shall submit billings by the 15th of each month on EN Form 93 to the Contracting Officer and/or his authorized representative. Billings shall be accompanied by a summary of work performed during the billing period. The Contractor is required to submit a written and signed "Release from Claims" form to the Contracting Officer with the final bill for services rendered under the terms of the contract.

14.0 REFERENCES.

14.1 Technical Guidance Manual for Underground Storage Tank Closure and Release Response, State of Hawaii Department of Health, August 1992.

14.2 USACE, Safety and Health Requirement Manual, EM 385-1-1, October 1992.

14.3 USACE, Chemical Data Quality Management for Hazardous Waste Remedial Activities, ER 1110-1-263, October 1990.

14.4 USACE, Requirements for the Preparation of Sampling and Analysis Plans, EM 200-1-3, September 1994.

14.5 USACE, Removal of Underground Storage Tanks (USTs), EM 1110-3-178, June 1993.

14.6 American Petroleum Institute (API), Publication 1604, Removal and Disposal of Used Underground Petroleum Storage Tanks.

14.7 American Petroleum Institute (API), Publication 2015, Cleaning Petroleum Storage Tanks.

14.8 National Institute for Occupational Safety and Health (NIOSH), Criteria for a Recommended Standard - Working in Confined Spaces.

14.9 USACE, Technical Guidelines for Hazardous and Toxic Waste Treatment and Cleanup Activities, EM 1110-1-502, April 1994.

Surf. Ship